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Αρ. Πρωτοκόλ: 6397/2015



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ΠΑΝΕΠΙΣΤΗΜΙΟ ΙΩΑΝΝΙΝΩΝ  
Τμήμα Μηχανικών Επιστήμης Υλικών  
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Ιωάννινα, 27 Μαρτίου 2015

Παρακαλώ γνωστοποιήσετε και αναρτήσετε στην ιστοσελίδα της Επιτροπής Ερευνών την πρόσκληση ενδιαφέροντος για μια θέση υποψήφιου διδάκτορα στα πλαίσια του έργου: MSCA-ITN-2014-ETN: Marie SkłodowskaCurie Innovative Training Networks (ITN-ETN), Grant agreement for: Training Networks, Action acronym: SELECTA, Action full title: "Smart ELECTrodeposited Alloys for environmentally sustainable applications: from advanced protective coatings to micro/nano-robotic platforms"

Grant agreement no: 642642

#81693

Με τιμή

Χ. Λέκκα

Επίκουρος Καθηγήτρια

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## PhD POSITION AT UNIVERSITY OF IOANNINA

**Project Title:** Design of Fe-, Cu- or Al-based functional coatings by molecular dynamics simulations and DFT calculations

**Objectives:** Design of Fe-, Cu- or Al-based materials with enhanced mechanical properties; Calculation of the basic mechanical quantities and stress-strain curves using molecular dynamics simulations; Study of several structures, geometries and size effects; investigation of adhesion of suitable molecules and/or H<sub>2</sub>O on Fe-, Cu- or Al-based coatings towards an understanding of the coating's corrosion resistance and/or hydrophobic features by density functional theory calculations.

**Expected Results:** Design of Fe-, Cu- or Al-based alloys for sustainable coatings applications, e.g. in terms of wear, polarity, biofouling and/or corrosion resistant properties.

**Requirements:**

The candidate must be fluent in spoken and written English. The candidate should hold a Masters degree in Physics, Materials Science or Chemistry or having basic knowledge on quantum mechanics and computational methods are encouraged. Possible experience in ab-initio calculations using DFT, LAPW or Tight-Binding methods as well as classical Molecular Dynamics Simulations will be taken into account.

**Application procedure:** Interested applicants should provide a full CV, certificates of the grades of examination, a letter of interest, describing their research career goals, skills and experience, as well as two letters of recommendation and fill the following online form: <http://selecta-etn.eu/job-application-form>